

DR. KARL JORDAN'S EXPEDITION TO SOUTH-WEST AFRICA  
AND ANGOLA: LASIOCAMPIDAE.

BY W. H. T. TAMS.

(With 9 plates.)

SO little material comes to this country from the regions of South-West Africa north of the Cape of Good Hope, that one is very grateful for the opportunity of examining the *Lasiocampidae* collected by Dr. Jordan during the winter of 1933-1934, when he went to South-West Africa and Angola.

The African fauna is so rich in *Lasiocampidae* that we are only just beginning to gather some idea of the large number of species belonging to this family to be found in that region, and our knowledge of their distribution is still extremely scanty, owing to the small numbers of specimens which come to us from any one locality. It is possible that more could be achieved if care were taken to utilise freshly caught or bred females for the purpose of attracting males. We are not nearly so anxious to have a single perfect female as we are to have both sexes in whatever condition they come to us, and damage to one female is worth risking if there is any possibility of getting her to attract males.

No attempt is made in this paper to do more than display facts, as it would be impossible to paint any sort of picture of the geographical distribution of the African *Lasiocampidae* on the basis of the material dealt with or on existing records. It becomes more and more evident that many records are worse than useless, because they are so misleading, some being accurate, but many being based on misidentifications. The many different kinds of environment existing in the African Continent, each with its own type of flora and fauna, make it imperative that every record shall be based on the most critical examination of each specimen. A glance at the four species of *Nadiusa* figured on Plate VII will give some idea of the difficulties involved.

In the main the subfamily arrangement given by Aurivillius in Seitz is retained, with the exception that for convenience I have placed the *Gastropachinae* at the end after the *Gonometinae*. Aurivillius's generic arrangement is also followed, except in the case of *Craspia igneotincta* Aurivillius, which I believe to be a *Trichopisthia*; and the genus *Lechriolepis*, which I believe to be more closely related to *Chrysopsyche* than Aurivillius seems to have thought.

MALACOSOMATINAE.

I. *Chrysopsyche mirifica leptophyes* subsp. n. (Plate iii, fig. 1, ♂; fig. 2, ♀).

♂. More delicate in colouring and less robust in build than the typical subspecies, *C. m. mirifica* Butler (*Ann. Mag. Nat. Hist.* (5), v, p. 386, 1880); underside lacking the vinaceous-purple suffusion.

♀. More delicate in colouring and less robust than the typical subspecies.

Holotype ♂ and paratype ♂. N. Angola, N'Dalla Tando (= Dala Tando), 2,700 feet, 19.xi.1908 (W. J. Ansorge).

Allotype ♀. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12.v. 1934 (K. Jordan).

2. **Chrysopsyche radei** Dewitz (Plate iii, fig. 5, holotype ♂).

*Lasiocampa radei* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 77, pl. ii, fig. 16 (1881).

Recorded by Dewitz from Chinchoxo (Dr. Falkenstein). I am able to give a figure of the type through the courtesy of Dr. Martin Hering of the Zoologisches Museum der Universität, Berlin. This is the only specimen I have ever seen.

3. **Lechriolepis dewitzi** Aurivillius (Plate iii, fig. 3, ♂; fig. 4, ♀).

*Lechriolepis anomala* Butler, Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 78, pl. ii, fig. 9 (1881), non Butler.

*Lechriolepis dewitzi* Aurivillius, in Seitz, *Grossschmett. der Erde*, xiv, p. 220, pl. 30a, *dewitzi* ♀ (1927).  
*Lechriolepis flaveola* Bethune-Baker, *Ann. Mag. Nat. Hist.* (8), vii, p. 563 (1911), ♂.

Angola, Amboim district, Fazenda Congulu, 700–800 m., 12–16.iv.1934,  
2 ♂♂.

Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12.v.1934, 1 ♀.

## LASIOCAMPINAE.

4. **Laeliopsis gemmatus** Wichgraf (Plate iv, fig. 1, holotype ♂; fig. 2, ♂).

*Phasicnecus gemmatus* Wichgraf, *Int. Ent. Zeitschr.*, xv, p. 19 (1921).

*Laeliopsis erythrura* ab. *marginata* Aurivillius, in Seitz, *Grossschmett. der Erde*, xiv, p. 217 (1927).

The type, which was presented to the British Museum by the late J. J. Joicey, is labelled: Angola, Bailundo. Thirteen ♂♂ collected by the late T. Alexander Barns in Angola (South Bihé district, Benguela Plateau, 5,000 feet, xi. 1928) apparently belong here, and these agree with the description of *L. erythrura* ab. *marginata* Aurivillius. The type of *L. erythrura* Aurivillius (*Ark. Zool.*, ix (11), p. 5, 1915) is a specimen from the Belgian Congo. All the Angola specimens I have seen, including one in the Tring Museum labelled: Angola, Bihé, 10.ix.1901 (Pemberton), belong to *L. gemmatus*, which may be only a subspecies of *L. erythrura*.

5. **Trabala burchardii** Dewitz.

*Amydana burchardii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 74, pl. ii, fig. 5 (1881).

A species based on Falkenstein's Chinchoxo material, and not represented in the collection under review.

6. **Beralade jordani** sp. n. (Plate iii, fig. 12, holotype ♂; fig. 13, allotype ♀).

♂ and ♀. White, the pattern of the forewings picked out in drab (cf. figures). Palpus warm buff, basally fuscous. Antenna honey yellow, shaft cartridge buff. Head cartridge buff with long black hair-scales around eyes. Forefemur streaked distally with black. Forewing white with the costa cartridge buff, pattern drab.

Expanse: ♂, 28 mm., ♀, 34–40 mm.

Forewing length: ♂, 12 mm., ♀, 15–18 mm.

Holotype ♂. S.W. Africa, Sissekab, N.W. of Otavi, 1,300 m., 14.xi.1933.

Allotype ♀. S.W. Africa, Lake Otjikoto, W. of Tsumeb, 17.xi.1933.

Paratypes. 2 ♀♀, Sissekab, 11.xi.1933.

All these specimens were taken by Dr. K. Jordan.

7. *Beralade quirimbo* sp. n. (Plate iii, fig. 8, ♂; fig. 6, enlarged view of right wings, ♂).

♂. Palpus fuscous inclined to sepia, mixed with warm buff. Antenna honey yellow, shaft cartridge buff. Head and thorax fuscous, avellaneous and white mixed, cartridge buff behind. Abdomen tergally cartridge buff. Pectus, legs and venter cartridge buff to warm buff streaked with fuscous. Forewing cartridge buff strongly shaded with a mixture of warm buff and fuscous proximally, distally irrorate with fuscous; a short fuscous longitudinal streak at base of cell; a prominent oblique white dash at end of cell, concave distad; an oblique fuscous antemedial fascia from base of vein Cu1 to inner margin at one-fourth; a prominent oblique fuscous postmedial fascia from costa before apex to inner margin before middle; a fine fuscous subterminal fascia from termen at end of vein R3 to inner margin at end of vein A2, accentuated by a decrease in the fuscous irroration before it; fringe white, with a fuscous line running through it. Hindwing cartridge buff; fringe with a fuscous line.

Underside: forewing cartridge buff, the fore half strongly suffused with fuscous; hindwing cartridge buff, with fuscous suffusion from costa to vein Sc.

Expanse: 30 mm. Forewing length: 13 mm.

This represents the typical subspecies, *B. quirimbo quirimbo* subsp. n.

Holotype ♂. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12. v. 1934 (K. Jordan).

Paratypes. 2 ♂♂, with data similar to those of the holotype. 1 ♂, Morro de Pundo, 60 km. N.E. of Lobito, 21. v. 1934 (K. Jordan).

8. *Beralade quirimbo exocyrta* subsp. n. (Plate iii, fig. 9, ♂; fig. 7, enlarged view of right wing).

♂. Almost indistinguishable from the preceding subspecies, but generally lighter in colour. Differs therefrom in the following features: smaller size; the white discocellular dash convex distad; hindwings have always more or less fuscous shading.

Expanse: 24-30 mm. Forewing length: 10.5-13 mm.

Holotype ♂. S.W. Africa, Otavifontein, near Otavi, 19. xi. 1933.

Paratypes. Otavifontein, 19. xi. 1933, 2 ♂♂, and 21. xi. 1933, 1 ♂. Sissekab, N.W. of Otavi, 1,300 m., 11. xi. 1933, 1 ♂. All the specimens were taken by Dr. Jordan.

9. *Beralade parva* Aurivillius (Plate iii, fig. 10, ♂; fig. 11, ♀).

*Beralade parva* Aurivillius, *Ann. S. Afr. Mus.*, xviii, p. 236 (1921).

S.W. Africa. Windhoek, 1,650 m., 20. i. 1934, 1 ♀.

Hoffnung, E. of Windhoek, 1,850 m., 10. i. 1934, 1 ♂, 1 ♀.

Okahandja, 1,320 m., 1-4. i. 1934, 1 ♂, 2 ♀♀.

Voigtsgrund, 1,300 m., 15. xii. 1933, 1 ♂.

Satansplatz, near Voigtsgrund, 1,300 m., 17. xii. 1933, 1 ♂, 1 ♀.

Naukluft Mts., 1,300-1,500 m., 7-10. xii. 1933, 2 ♀♀.

Buellesport (= Büllsport), foot of Naukluft Mts., 1,400 m., 6. xii. 1933, 6 ♂♂, 1 ♀.

All the above specimens were taken by Dr. Jordan.

10. *Odontocheilopteryx triodonta* sp. n. (Plate iv, fig. 3, holotype ♂; figs. 4, 6, 8, 10, ♂ genitalia).

♂. Palpus cartridge buff shaded with light to warm buff and chestnut to warm sepia. Antenna honey yellow. Head cartridge buff with some warm buff shading. Thorax cartridge buff, shaded with warm buff, patagium with a few blackish-brown scales proximally, tegula with strong shading of warm sepia. Abdomen maize yellow, streaked terminally and ventrally with warm sepia. Pectus and legs chestnut to warm sepia streaked with light buff. Forewing light buff shaded with warm sepia and fuscous black (for pattern cf. figure). Hindwing maize yellow. Underside of forewing light buff lightly shaded with warm sepia, of hindwing maize yellow.

Expanse: 30–34 mm. Forewing length: 13–15 mm.

Holotype ♂ (30 mm.) and paratype ♂ (34 mm.).

Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12. v. 1934 (K. Jordan).

Paratype ♂. Amboim district, Fazenda Congulu, 700–800 m., 12–16. iv. 1934 (K. Jordan).

Plate iv, figs. 5, 7 and 9 show corresponding structures of the ♂ genitalia of *O. myxa* Wallengren (*Wien. ent. Mon.*, iv, p. 165, 1860), for comparison with the figures of the genitalia of the new species. In these moths as in many other *Lasiocampidae*, the valves or claspers are much reduced, the function of clasping being carried out largely with the aid of the greatly developed and hinged extension of the 9th ventrite (fig. 8, *O. triodonta*; fig. 9, *O. myxa*), here shown broken off from the main part of segment 9 (cf. figs. 4 and 5 respectively). In the case of the new species the aedeagus possesses much larger cornuti (cf. figs. 7, *O. myxa*, and 10, *O. triodonta*).

11. *Philotherma tandoensis* Bethune-Baker (Plate v, fig. 1, holotype ♂).

*Philotherma tandoensis* Bethune-Baker, *Ann. Mag. Nat. Hist.* (9), xx, p. 333 (1927).

Bethune-Baker had two males, labelled N. Angola, N'Dalla Tando, 2,700 feet, 26. x. 1908 (Dr. W. J. Ansorge).

In the Zoological Museum, Tring, are three specimens apparently belonging to the same species, with the following data:

♂, Angola, Canhoca (Dr. Ansorge)—(Plate v, fig. 2).

♀, Benguela<sup>1</sup> (Dr. Ansorge)—(Plate v, fig. 3).

♀, Angola, Bihé.

12. *Philotherma melambela* sp. n. (Plate v, fig. 4, holotype ♀).

♀. Warm buff, the head, thorax and abdomen, dorsally and ventrally, suffused with antimony yellow. Forewing with a black-edged white discocellular spot, and an indistinct black postmedial fascia bowed (concavity basad) from costa at three-fifths to vein M<sub>2</sub>, thence straight and oblique to middle of inner margin; a subterminal series of ill-defined sagittate marks roughly parallel with termen. Hindwing with a prominent subterminal series of black sagittate marks roughly parallel with termen. Underside similar, forewing lacking the discocellular spot.

Expanse: 93 mm. Forewing length: 43 mm.

Holotype ♀. Angola, Bihé, Salumkinga-Angulo, ix. 1934 (R. Braun).

In the Zoological Museum, Tring, is another ♀, slightly crippled, labelled: Angola, Bange Ngola, 2. x. 1903 (Dr. Ansorge).

<sup>1</sup> The Portuguese spelling is Benguela.

13. **Olyra sublineata** Walker (Plate xi, fig. 4, ♂; fig. 5, ♀; fig. 6, larva).

*Poecilocampa sublineata* Walker, *Proc. Nat. Hist. Soc. Glasgow*, i, p. 342 (1869).

Walker's type is a ♀, labelled simply: Congo.

The following Angolan (♂) and Congo (♀) specimens are figured:

♂. N. Angola, N'Dalla Tando, 2,700 feet, 10.xii.1908 (W. J. Ansorge).

Agrees with the description and figure of *Lasiocampa distantii* Dewitz (*Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 79, pl. ii, fig. 14, 1881). There is another ♂ in the British Museum from the same source, dated 20.xi.1908.

♀. Congo Belge, Congo R., Kinchasa, v. 1920 (T. A. Barns).

Matches Walker's type of *Olyra sublineata*. Plate xi, fig. 6 shows a larva preserved by Monsieur Ch. Seydel, to whom I am indebted for the opportunity of making the photograph. The specimen was labelled:

Elisabethville, iv. 1925 (Ch. Seydel). No. L 8174.

14. **Bombycopsis indecora** Walker.

*Lasiocampa indecora* Walker, *List Lep. Ins. B. M.*, xxxii, p. 561 (1865).

Walker's type is a South African specimen. Aurivillius (in Seitz) says: "South and West Africa at least as far as the Cameroon (Bamenda)." The species is not represented in any material I have seen from Angola.

15. **Catalebeda producta** Walker (Plate vi, fig. 1, ♂).

*Lebeda producta* Walker, *List Lep. Ins. B. M.*, vi, p. 1465 (1855).

Angola, Amboim district, Fazenda Congulu, 700-800 m., 12-16.iv.1934, 1 ♂ (K. Jordan).

The place of origin of Walker's type is unknown.

16. **Catalebeda elegans meridionalis** subsp. n. (Plate vi, fig. 2, holotype ♂).

♂. Differs from ♂ of *C. elegans elegans* Aurivillius (*Ergebn. Zweit. Deutsch. Zentr. Afrika Exp.*, i, p. 1293, Plate L, fig. 14, 1925: S. Cameroon, N'Gola, 28.iv.1911), in the structure of the 8th ventrite, which in the British Museum example of the typical subspecies (from the Cameroons, Efulen, H. L. Weber) has the lateral arms long, curved and sharply pointed, and the inner process apparently blunt, its point being directed dorsad, whereas the subspecies here described has the lateral arm short, and the inner process with its point directed mediad (cf. Plate vi, fig. 4, *C. e. elegans*; fig. 5, *C. e. meridionalis*).

Holotype ♂. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12.v. 1934.

**Nadiasa** Walker.

*Nadiasa* Walker, *List Lep. Ins. B. M.*, v, p. 1014 (1855).

This genus has long been known under Moore's name *Taragama*, owing to the fact that the generic position of the type species, *N. concolor* Walker (*List. Lep. Ins. B. M.*, v, p. 1015, 1855), had not been satisfactorily determined, although Aurivillius long ago suggested that Walker's name might be revived if *N. concolor* proved to be a *Taragama*. The citation of *N. concolor* as the type of the genus rests on Kirby's statement in his *Synonymic Catalogue of Lepidoptera Heterocera*, 1892, though Kirby did not recognize the relationship of Walker's type specimen, associating with it two other Walker species belonging to a very different genus, viz. *Anadiasa* Aurivillius. The acquisition of Cape Colony specimens which I

am satisfied are *N. concolor* now establishes with certainty the identity of both the species and the genus, and *Taragama* Moore (*Cat. Lep. Mus. E. I. House*, ii, p. 427, 1859) falls as a synonym. The true *N. concolor* Walker is figured for the first time on Plate vi, fig. 7, ♂, fig. 8, ♀, and this is also the first time, so far as I am aware, that the ♂ has been received in this country. To the typical section of the genus belong *N. jordani* and *N. pancala*, described below, and amongst others *N. carinata* Wallengren (figured on Plate vi, fig. 6) and *N. jansei* (Plate vi, fig. 5), a species which has sometimes been confused with *N. carinata*.

*N. basale* Walker (*List Lep. Ins. B. M.*, vi, p. 1448, 1855: *Megasoma basale*) represents another section of the genus, of which there are many African species. Some idea of the difficulties involved in determining the value of variations in these insects may be gathered from a perusal of the photographs here reproduced. The moths are so similar that one finds it no easy matter to decide, even after a study of the genitalia, whether one is dealing with individual varieties or different species. In a series of Nigerian ♀♀ which I believe to belong to *N. amblycalymma*, the shape of the *lamella antevaginalis* is so constant that I have definitely taken the view that the Angolan ♀♀ before me are different species, more especially as, in spite of great similarity between them, each possesses a different facies. I hope that the photographs here reproduced will be the means of encouraging anyone collecting in Africa to obtain as many specimens as possible of each species, and I also hope that anyone with the time and opportunity will try to rear to maturity any larvae of the sort figured.

17. *Nadiasa jordani* sp. n. (Plate vi, fig. 9, holotype ♂).

♂. Palpus chestnut irrorate with ochraceous orange ventrally, dorsally light buff mixed with white. Antenna honey yellow. Head light buff mixed with white, sparsely streaked with chestnut. Thorax and abdomen dorsally and ventrally light to warm buff streaked with chestnut, tegula chestnut, legs shaded with chestnut. Forewing chestnut to chocolate densely irrorate with light to warm buff except for a distally white-edged English red patch at base between cell and inner margin, a similar patch proximally edged with chestnut beyond and adjoining the end of the cell, the latter forming part of a chestnut patch between the white antemedial and postmedial fasciae from costa to vein Cu1; a white spot at base of cell; subterminal almost obsolete, consisting of a series of inter-neural English red dashes; fringe light buff. Hindwing chocolate, irrorate distally with light buff, with light to warm buff on inner margin towards anal angle, and cartridge buff fringe, chocolate near anal angle. Underside chocolate, forewing light buff along inner margin.

Expanse: 42 mm. Forewing length: 19 mm.

Holotype ♂. South Central Angola, Upper Cubango-Cunene Watershed, 5,500 feet, x.1928 (T. A. Barns).

Richer in colour, smaller than, but similar in pattern and structure to *N. repanda* Hübner (*Europ. Schmett. Bomb.*, ff. 274, 275: 1818-1822; 346: 1834-1841), of which it may ultimately prove to be a subspecies.

18. *Nadiasa pancala* sp. n. (Plate vi, fig. 10, holotype ♀).

♀. Palpus light to warm buff mixed with fuscous, orange laterally and ventrally. Antenna honey yellow, shaft warm buff, irrorate with fuscous. Head light buff mixed with vinaceous brown and fuscous. Thorax light to warm

buff, patagium streaked with white, vinaceous brown and fuscous, tegula wax yellow to olive ochre (faded?). Abdomen tergally light to warm buff. Pectus warm buff, vinaceous russet to Hay's russet in front. Venter warm buff, irrorate with vinaceous russet. Legs warm buff with vinaceous russet and fuscous shading. Forewing with the proximal two-thirds vinaceous russet suffused with Hay's russet, dark vinaceous brown to fuscous at the postmedial fascia, and traces of white at middle of costa; distal third warm buff with white along the post-medial fascia, irrorate with vinaceous brown. Hindwing cartridge buff to light buff, the proximal two-thirds suffused with vinaceous brown, the latter edged with diffused white. Underside light to warm buff, the proximal two-thirds of each wing suffused with vinaceous brown.

Expanse: 60 mm. Forewing length: 27.5 mm.

Holotype ♀. S.W. Africa, Swakopmund, 6.xi.1933 (K. Jordan).

The ♀ of the previously described species must be very similar to this in appearance (cf. Plate vi, fig. 9, *N. jordani*, ♂).

19. *Nadiasa jansei* sp. n. (Plate vi, fig. 5, holotype ♂).

♂. Palpus light buff dorsally, yellow ochre to ochraceous orange ventrally. Antenna honey yellow, shaft light buff. Thorax anteriorly light buff mixed with russet, tegula yellow ochre to ochraceous orange, edged with light buff, mesothorax and metathorax warm buff to ochraceous buff. Abdomen tergally warm buff to ochraceous buff, distally tinged with russet. Pectus, legs and venter light to warm buff, the scales surrounding the genital opening, and the terminal tuft, russet to chocolate. Forewing russet, the fasciae cartridge buff (for pattern cf. figure); a cartridge buff spot at base of cell; costa warm buff; an ochraceous orange patch bounded by lower margin of cell, anal vein and antemedial fascia; discocellular streak chocolate, succeeded by a patch of ochraceous orange; a warm buff area between lower margin of cell and inner margin and the antemedial and postmedial fasciae; chocolate edging at tornus. Hindwing russet, inner margin light to warm buff, wing apex and anal angle edged with chocolate; postmedial fascia cartridge buff. Underside russet to vinaceous tawny, fore- and hindwings with costa warm buff, inner margin light buff, cartridge buff postmedial fascia.

Expanse: 37 mm. Forewing length: 16.5 mm.

Holotype ♂. Transvaal, Pretoria, 6.xi.1906 (A. J. T. Janse).

Smaller than *N. carinata* Wallengren (*Wien. ent. Mon.*, iv, p. 165, 1860), the fasciae more prominent, the colour less rich (cf. Plate vi, fig. 5—*N. jansei*, fig. 6—*N. carinata*).

20. *Nadiasa quirimbo* sp. n. (Plate vi, fig. 11, holotype ♀).

♀. Palpus chestnut, streaked with warm buff and ochraceous orange. Antenna honey yellow, the shaft chestnut streaked with warm buff. Head and thorax warm buff mixed with avellaneous to vinaceous fawn. Abdomen tergally warm buff suffused with vinaceous fawn, tegula ochraceous orange. Pectus vinaceous russet to walnut brown, sparsely streaked with warm buff. Legs walnut brown to chestnut, streaked with warm buff. Venter walnut brown, streaked with warm buff, segments edged distally with light buff. Forewing vinaceous russet, patchily relieved with ochraceous orange; a broad tuft of chestnut brown and fuscous scales at end of cell; antemedial and postmedial

fasciae fuscous, white-edged; subterminal fascia ill-defined, indicated by vandyke brown sealing; on the inner margin a lanceolate patch, light buff irrorate with vinaceous russet, white-edged except on inner margin, its point extending just beyond the postmedial fascia; fringe vinaceous brown. Hindwing warm buff with a vinaceous russet suffusion increasing towards the subterminal area; a fine fuscous terminal edging; fringe light buff, edged with fuscous. Underside of both wings almost uniform vinaceous russet irrorate with light to warm buff.

Expanse: 74 mm. Forewing length: 34 mm.

Holotype ♀. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12.v. 1934 (K. Jordan).

21. *Nadiasa oinopa* sp. n. (Plate vi, fig. 12, ♂; fig. 13, ♀).

♂ and ♀. Pattern as in figures. Ground colour of forewing vinaceous brown, enriched basad by chocolate, fringe fuscous. Hindwing warm buff suffused with vinaceous russet, fringe fuscous.

Expanse: ♂, 44-46 mm., ♀, 60-63 mm.

Forewing length: ♂, 19-20 mm., ♀, 26-28 mm.

♂ genitalia with the 9th ventrite similar to that of *N. cuneata* Distant (Plate vii, figs. 10, 11), but with the terminal crown of spines narrow, the spines small and more or less uniform in size.

♀ genitalia. Armature of *ostium bursae* broad, with a long, narrow, blunt process, somewhat irregular in outline (cf. Plate vi, fig. 14).

Larva (Plate viii, fig. 7). I am indebted to Monsieur Ch. Seydel for the opportunity of photographing this beautifully preserved larva (M. Seydel's No. L 8172).

Holotype ♂ and allotype ♀. Belgian Congo, Elisabethville, xii. 1926 (Ch. Seydel).

Paratypes from the same source, dated xi. 1926, 1 ♂, 1 ♀.

22. *Nadiasa directa* Mabille (Plate vii, fig. 1, holotype ♀).

*Pachypasa directa* Mabille, *Ann. Soc. ent. Belge*, xxxvii, p. 58 (1893).

Mabille gives Gabun as the locality. Plate vii, figs. 2, 3 show two views of the ♀ genital armature. It will be noticed that in the forewing the oblique fuscous dashes in the subterminal fascia are unusually long and extend basad almost to the postmedial fascia. Mabille's type ♀ is in the British Museum.

Expanse: 82 mm. Forewing length: 38 mm.

23. *Nadiasa pamphenges* sp. n. (Plate vii, fig. 5, holotype ♀).

♀. Ground colour vinaceous tawny to vinaceous rufous, shaded with chestnut, which is richest at the forewing base and tegula. Pattern as seen in the figure, fasciae fuscous edged with vinaceous fawn, discocellular spot prominent. *Ostium bursae* with a simple armature, the *lamella antevaginalis* with a moderately long, fairly stout, parallel-sided process (cf. Plate vii, fig. 15).

Expanse: 60 mm. Forewing length: 28 mm.

Holotype ♀. N. Angola, N'Dalla Tando, 2,700 feet, 15.xi.1908 (W. J. Ansorge).

24. *Nadiasa amphilecta* sp. n. (Plate vii, fig. 4, holotype ♀).

♀. Ground colour warm buff tinged with vinaceous tawny, shaded with auburn on forewing proximally, and most of tegula. Pattern as seen in figure. *Ostium bursae* with a strong armature, the *lamella antevaginalis* broad, with a moderately long, somewhat irregularly shaped blunt process (cf. Plate vii, fig. 7).

Expanse: 78 mm. Forewing length: 35 mm.

Holotype ♀. ? Angola (Monteiro). The specimen is labelled: Angola or Delagoa Bay.

25. *Nadiasa torynecteta* sp. n. (Plate vii, fig. 13, holotype ♀; fig. 14, ♀ genital armature).

♀. Coloration intermediate between that of *N. directa* Mabilie and *N. amphilecta* Tams. Light edging of tegula very fine. Forewing more rounded, termen less oblique than in the two species just mentioned. *Ostium bursae* strongly chitinized, the *lamella antevaginalis* with a long curved spatulate process.

Expanse: 62 mm. Forewing length: 28 mm.

Holotype ♀. Angola, Pungo Andongo (A. v. Homeyer).

26. *Nadiasa amblycalymma* sp. n. (Plate vii, fig. 6, ♀ genital armature).

♀. General coloration tawny to vinaceous tawny and vinaceous russet; pattern sharply defined. Forewing more richly coloured at base, there inclined to chestnut; a prominent chestnut brown discocellular dot; fasciae sepia, antemedial proximally and postmedial distally edged with light buff; area between postmedial and subterminal tawny, proximally shaded with vinaceous russet; a light buff terminal line, fringe sepia. Hindwing tawny, distally suffused with vinaceous tawny; a light buff terminal line; fringe sepia. Underside vinaceous tawny, forewing with faint traces of fasciae similar to those on upper side, hindwing with a bowed postmedial almost exactly through the middle. ♀ genital armature with the *ostium bursae* strong, the process arising from the *lamella antevaginalis* shaped like a broad chisel blade.

Expanse: 64 mm. Forewing length: 30 mm.

Holotype ♀. Côte d'Ivoire.

Very similar to *N. torynecteta*, but with a much smoother appearance, lighter in colour, with the fasciae very sharply defined. In *N. torynecteta* the postmedial fascia on underside of hindwing is more prominent, and set distinctly farther distad.

27. *Nadiasa pachyla* sp. n. (Plate viii, fig. 1, holotype ♂; fig. 2, allotype ♀).

♂. Palpus chocolate sparsely irrorate with warm buff. Antenna honey yellow, shaft vinaceous brown densely irrorate with warm buff. Thorax vinaceous brown to chocolate sparsely irrorate with warm buff, tegula chocolate, velvety, finely edged with light buff. Abdomen tergally vinaceous brown sparsely irrorate with warm buff. Pectus, legs and venter chocolate, sparsely irrorate with light to warm buff. Forewing chocolate, rich and velvety from base to postmedial fascia; antemedial and postmedial fasciae fuscous; a light buff and chocolate pale patch from wingbase extending along inner margin to just beyond postmedial fascia; for pattern see figure. Hindwing vinaceous brown irrorate with warm buff, suffused with chocolate distally. Underside vinaceous brown, costa and fringe in both fore- and hindwings edged with chocolate.

♀. Similar, colder in tone of colour, warm sepia instead of chocolate, olive brown instead of vinaceous brown.

Expanse: ♂, 50–52 mm.; ♀, 72–76 mm.

Forewing length: ♂, 21–23 mm.; ♀, 32–34 mm.

Holotype ♂. Belgian Congo, Elisabethville, xii. 1926 (Ch. Seydel).

Allotype ♀. Belgian Congo, Elisabethville, iv. 1926 (Ch. Seydel).

Paratypes from the same source, 2 ♂♂, 1 ♀, xii. 1926.

The ♀♀ are hardly distinguishable from the Angolan ♀ described as *N. sminthocara* below, but they have a rougher facies, with somewhat narrower and lighter hindwings, as may be seen by comparing the figures. The *lamella antevaginalis* in *N. sminthocara* is broader than that of *N. pachyla*. *N. pachyla* is more robust and of a more rugged aspect than *N. coilotoma* Bethune-Baker. The larva (cf. Plate viii, fig. 6) was found at Elisabethville by Monsieur Ch. Seydel, to whom I am indebted for the opportunity of photographing it, and also for all the specimens listed above. The specimen of the larva bore a number (L 8248). The ♀♀ were reared from larvae to which M. Seydel assigned a different number (L 8225), and apparently I overlooked this larva when I had the opportunity of photographing the specimens. Plate viii, fig. 9 shows two larvae of *N. distinguenda* Aurivillius (*Trans. Ent. Soc. Lond.* 1905, p. 315, Plate xvi, fig. 13), figured here for comparison with the figures of the larvae of *N. pachyla* and *N. oinopa* (Plate viii, figs. 6 and 7 respectively).

28. **Nadisa coilotoma** Bethune-Baker (Plate viii, fig. 8, holotype ♂).

*Metanastris coilotoma* Bethune-Baker, *Ann. Mag. Nat. Hist.* (8), vii, p. 564 (1911).

The type bears a label: Angola, N'Dalla Tando, 2,700 feet, 5.xi.1908 (Dr. W. J. Ansorge).

29. **Nadisa graberii** Dewitz (Plate viii, fig. 3, holotype ♀).

*Pachypasa graberii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 72, pl. ii, fig. 3 (1881).

I have included, with a photograph of Dewitz's type, one of the only specimen we have in the British Museum collection providing a fair match for the type, a ♀ from the Oberthür collection labelled: Afriq. Occid., Kamerun, Johann-Albrechts Höhe Station (L. Conradt)—(cf. Plate viii, fig. 4).

30. **Nadisa sminthocara** sp. n. (Plate viii, fig. 5, holotype ♀).

♀. Palpus and antenna Natal brown streaked with vinaceous buff. Head and thorax vinaceous buff degraded with Natal brown, tegula chestnut brown inwardly edged with vinaceous buff. Abdomen tergally vinaceous buff degraded with avellaneous. Pectus and legs Natal brown streaked with vinaceous buff. Venter vinaceous buff shaded with Natal brown. Forewing warm sepia, enriched basad to chestnut brown, with a degraded patch of vinaceous buff on the inner margin, edged, except along inner margin itself, with cartridge buff; a fuscous spot at end of cell; a deeply bowed fuscous antemedial fascia, almost semi-circular; a straight, oblique, fuscous postmedial fascia from costa just before apex towards inner margin at two-thirds, but not crossing the marginal vinaceous buff patch. Hindwing vinaceous buff lightly suffused with warm sepia except along inner margin. Underside vinaceous buff slightly degraded with warm sepia.

Expanse: 68 mm. Forewing length: 32 mm.

Holotype ♀. Angola, Amboim district, Fazenda Congulu, 700–800 m., 7–12. iv. 1934 (K. Jordan).

Evidently closely related to *N. distinguenda* Aurivillius (*Trans. Ent. Soc. Lond.* 1905, p. 315, Plate xvi, fig. 13), from which it differs chiefly in the richer colouring; the hindwing in *N. distinguenda* is always uniformly lighter. I have seen similar specimens, not necessarily belonging to this species, labelled “*graberii* Dewitz,” but the colour tone of *N. graberii* is much colder, matching best the clove brown of Ridgway’s *Color Standards and Nomenclature*, 1912.

### 31. *Pachypasa subfascia* Walker (Plate ix, fig. 1, ♀; fig. 2, ♂).

*Pachypasa ? subfascia* Walker, *List. Lep. Ins. B. M.*, vi, p. 1426 (1855).

*Pachypasa subfascia* Walker, Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 72, pl. ii, fig. 12 (1881)

Dewitz figures a ♀ from Chinchexo, the only specimen in Dr. Falkenstein’s collection. There are no specimens in the material under review, but a ♂ and a ♀ from the Cameroons are figured.

### 32. *Pachypasa imitans* Aurivillius (Plate ix, fig. 4, ♂).

*Taragama imitans* Aurivillius, *Ent. Tidskr.*, xiv, p. 213 (1893).

*Pachypasa imitans* Aurivillius, in Seitz, *Grossschmett. der Erde*, xiv, p. 242, pl. 33d, *imitans* (1927).

Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12. v. 1934 (K. Jordan), 1 ♂.

### 33. *Pachypasa mesoleuca mesoleuca* Strand.

*Pachypasa mesoleuca* Strand, *Ent. Rundschau*, xxviii, p. 150 (1911).

*Pachypasa mesoleuca* Strand, *Lep. Niepeltiana*, i, p. 22, pl. iv, fig. 3 (1914).

Dr. Jordan found a larva at Fazenda Congulu, Amboim district, 700–800 m., in April (7–11), 1934, from which he reared a specimen which I feel sure must belong to this species. It is a ♀, resembling the figure in Seitz (*Grossschmett. der Erde*, xiv, pl. 32f, *mesoleuca*) in pattern, but the colour is tawny.

In the British Museum (Natural History) there are three ♀♀ from Nyasaland with the same tawny coloration. These I believe constitute an eastern geographical race, and I propose to call it *Pachypasa mesoleuca pyrsocoma* subsp. n. (Plate ix, fig. 5).

Holotype ♀. Nyasaland, Mt. Mlanje, 8. v. 1913 (S. A. Neave).

Paratype ♀. Nyasaland, Mt. Mlanje, 23. iv. 1913 (S. A. Neave).

Paratype ♀. Nyasaland, Zomba, Lingangala River, xii. 1920 (H. Barlow).

### 34. *Pachypasa honrathii* Dewitz (Plate ix, fig. 7, ♀).

*Pachypasa honrathii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 73, pl. ii, fig. 11 (1881).

Angola, Pungo Andougo (A. v. Homeyer), 1 ♀.

### 35. *Pachypasa pyrsocorsa* sp. n. (Plate ix, fig. 6, holotype ♀).

♀. Palpus chestnut, sparsely streaked with ochraceous orange. Antenna honey yellow, the shaft clothed with chestnut scales irrorate with ochraceous orange. Head with frons chestnut streaked with ochraceous orange, vertex light greyish vinaceous. Abdomen tergally light orange yellow, the segments tinged distally with ochraceous tawny. Pectus and venter buff pink suffused with chestnut. Legs chestnut irrorate with ochraceous orange. Forewing vinaceous tawny to cinnamon rufous, buff pink before the antemedial fascia and

after the postmedial fascia, these fasciae being fuscous; pattern as in figure. Hindwing buff pink, proximally tinged with light orange yellow, distally suffused with vinaceous tawny. Underside of forewing and hindwing proximally light orange yellow, distally vinaceous tawny.

Expanse: 90 mm. Forewing length: 42 mm.

Holotype ♀. Angola, Pungo Andongo (A. v. Homeyer).

### 36. *Pachypasa papyroides* sp. n. (Plate xi, fig. 14, holotype ♀).

♀. Palpus ochraceous orange mixed with chestnut. Antenna honey yellow, the shaft warm buff shaded distally with chestnut. Head with frons ochraceous orange, vertex light buff. Thorax light buff with a hoary appearance, with a narrow chestnut medial longitudinal stripe. Abdomen tergally ochraceous orange to orange. Pectus, legs and venter chestnut streaked with ochraceous orange, the tarsal segments edged distally with orange. Forewing vinaceous tawny, proximal third of costa cartridge buff to warm buff; antemedial fascia cartridge buff, edged proximally and distally with diffuse fuscous, slightly wavy, from middle of costa oblique to inner margin at one-third; postmedial fascia similar, parallel with termen to vein Cu2, then to inner margin at two-thirds; a broad strip of cartridge buff suffusion beyond the postmedial extending from vein Cu2 to inner margin; subterminal fascia only slightly indicated by fuscous shading; fringe tawny olive with some light buff edging near the tornus. Hindwing vinaceous tawny, paler in proximal third; a very faint indication of a bowed postmedial fascia; termen edged with tawny olive; fringe warm buff. Underside of both wings vinaceous tawny, with indications of the two fuscous edges of the postmedial fascia on the forewing.

Expanse: 94 mm. Forewing length: 44 mm.

Holotype ♀. Angola, Amboim district, Fazenda Congulu, 700-800 m., 17-22. iv. 1934 (K. Jordan).

This moth resembles very closely *Pachypasa papyri* Tams (*Ann. Mag. Nat. Hist.* (10), viii, p. 36, Plate i, fig. 2, 1931), of which I was able to describe both sexes from a bred series, and from which it differs chiefly in colour. It may be the Angolan representative of that species, but this cannot be definitely established without more material, particularly males.

### 37. *Pachypasa dallana* Bethune-Baker (Plate ix, fig. 3, holotype ♀).

*Pachypasa dallana* Bethune-Baker, *Ann. Mag. Nat. Hist.* (9), xx, p. 331 (1927).

N. Angola, N'Dalla Tando, 14. i. 1909 (W. J. Ansorge).

If not actually identical with *Pachypasa rohdei* Aurivillius (*Ark. Zool.*, v (5), p. 18, 1909), *P. dallana* is certainly very closely related to that species.

### 38. *Pachypasa wellmanni* Weymer.

*Pachypasa wellmanni* Weymer, *Deutsch. ent. Zeit.*, 1908, p. 510, ♀; p. 733, ♂ (1908).

*Pachypasa wellmanni* Weymer, Aurivillius, in Seitz, *Grossschmett. der Erde*, xiv, p. 245, pl. 34a, ♂ (1927).

Benguela.

From the figure one would judge this species to belong to the genus *Craspia*. I have seen no specimens from Angola.

39. *Leipoxais peraffinis* Holland (Plate x, fig. 1, ♂).

*Leipoxais peraffinis* Holland, *Psyche*, vi, p. 520 (1893).

Ogové River. There is a paratype ♂ in the collection of the British Museum (Natural History).

Ogové River, Lambarené, i, 1908 (W. J. Ansorge), 1 ♂.

N. Angola, N'Dalla Tando, 2,700 feet, 5, 23.xi.1908 (W. J. Ansorge), 2 ♂♂.

S.W. Congo, Kuila River, Udamba (J. S. Bousfield), 1 ♀.

40. *Leipoxais fuscofasciata* Aurivillius.

*Leipoxais fuscofasciata* Aurivillius, *Ark. Zool.*, v (5), p. 12 (1909).

♂. Mouth of Congo River, Banana.

I know only the figure in Seitz, *Grossschmett. der Erde*, xiv, p. 248, pl. 34b, *fuscofasciata*, but have included the reference as the moth may occur in Angola.

41. *Leipoxais haematidea* Snellen.

*Gastropacha haematidea* Snellen, *Tijdschr. v. Ent.*, xv, p. 44, pl. iii, figs. 13, 14 (1872).

This is another species occurring at the mouth of the Congo River.

42. *Leipoxais crenulata* Bethune-Baker (Plate x, fig. 2, holotype ♂).

*Leipoxais [sic] crenulata* Bethune-Baker, *Ann. Mag. Nat. Hist.* (8), vii, p. 565 (1911).

N. Angola, N'Dalla Tando, 2,700 feet, 3.xi.1908 (W. J. Ansorge).

43. *Leipoxais marginepunctata* Holland (Plate x, fig. 3, ♂).

*Leipoxais marginepunctata* Holland, *Psyche*, vi, p. 531 (1893).

Aurivillius gives the distribution of this species as Sierra Leone to the Congo. Some form of the species may occur in Angola, and for this reason I have included a figure of a specimen with the following data:

♂. Congo, Luteto, 16.xi.1903 (C. Christy).

44. *Eucraera köllikerii* Dewitz (Plate x, fig. 4, ♂).

*Lasiocampa köllikerii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 78, pl. ii, fig. 15 (1881).

Cabinda, Chinchoxo (Dr. Falkenstein), paratype ♂ in the British Museum (Natural History).

Angola, Amboim district, Fazenda Congulu, 700-800 m., 12-16.iv.1934 (K. Jordan), 2 ♂♂.

Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12.v.1934 (K. Jordan), 2 ♂♂.

45. *Eucraera gemmata asaphes* subsp. n.

♂. The pointed process arising from the proximal half of the valve in the genitalia longer than that in the typical subspecies from the Transvaal, *E. gemmata gemmata* Distant (*Ann. Mag. Nat. Hist.* (6), xx, p. 207, 1897, *Dendrolimus gemmata*).

Holotype ♂. N. Angola, N'Dalla Tando, 2,700 feet, 27.x.1908 (W. J. Ansorge).

Allotype ♀. Angola, S. Bihé district, Benguela Plateau, 5,000 feet, xi.1928 (T. A. Barns)—(cf. Pl. x, fig. 5).

Paratype ♀. Angola, Cubal River, ii.1899 (Penrice)—(Pl. x, fig. 7).

46. *Eucraera aphrasta* sp. n. (Plate x, fig. 6, holotype ♂).

♂. White, pattern in degraded Isabella colour. Abdomen tergally ochraceous orange, the segments proximally shaded with fuscous black. Fuscous black discocellular dots on forewing and hindwing above, on hindwing only beneath. White antemedial and postmedial fasciae narrow, serrate, the former with two sharp angles. Genitalia: Valve with the proximal pointed process moderately long.

Holotype ♂. Angola, Morro de Pundo, 60 km. N.E. of Lobito, 21.v.1934 (K. Jordan).

This species is not easily distinguished from *E. gemmata asaphes* described above, which, however, has the proximal half of the forewing chamois. The pointed process arising from base of valve is intermediate between the long process in the subspecies of *E. gemmata* and the very short process found in *köllikerii*.

47. *Mimopacha jordani* sp. n. (Plate x, fig. 8, holotype ♂; fig. 9, allotype ♀).

♂. Chestnut brown. Antennal pectinations infusate, the shaft chestnut brown, with light buff at base. Forewing shape and pattern as in figure, the fasciae indicated by fine light buff scaling; area between postmedial and subterminal fasciae vinaceous drab shaded proximally and distally with dusky brown; a prominent rounded discocellular spot with three light buff dots, the chestnut brown ground colour surrounding it somewhat richer; fringe edged with light buff. Hindwing with a hyaline spot at end of cell, similarly surrounded by enriched chestnut brown, of which there is an almost velvety patch between the subterminal fascia and the termen from apex to vein Cu1. Underside similar, the forewing lacking the discocellular spot and dots.

Expanse: 50–58 mm. Forewing length: 24–26 mm.

♀. Similar, larger, less rich in colour.

Expanse: 65 mm. Forewing length: 31 mm.

Holotype ♂. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12.v. 1934 (K. Jordan).

Allotype ♀, and 3 paratype ♂♂. Angola, Amboim district, Fazenda Congulu, 700–800 m., 7–11.iv.1934 (K. Jordan).

48. *Mimopacha gerstaeckerii* Dewitz (Plate x, fig. 10, paratype ♂).

*Gastropacha gerstaeckerii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 74, pl. ii, fig. 6 (1881).

Not represented in Dr. Jordan's material. The figure shows a paratype ♂ from the original locality, Chinchoxo (Dr. Falkenstein).

49. *Mimopacha knoblauchii* Dewitz (Plate x, fig. 11, paratype ♂).

*Gastropacha knoblauchii* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 75, pl. ii, fig. 2. ♂; fig. 4. ♀ (1881).

Not represented in Dr. Jordan's material. The figure shows a paratype ♂ from the original locality, Chinchoxo (Dr. Falkenstein).

50. *Mimopacha excavata* Hering (Plate x, fig. 12, paratype ♂).

*Mimopacha excavata* Hering, *Deutsch. ent. Zeitschr.* 1935, p. 176.

The paratype figured is a Belgian Congo specimen now in the British Museum (Natural History).

51. *Odontopacha spissa* Tams (Plate v, fig. 5, ♂; fig. 6, ♀).

*Odontopacha spissa* Tams, *Ann. Mag. Nat. Hist.* (10), iii, p. 154 (1929).

Angola, Amboim district, Fazenda Congulu, 700–800 m., 12–16.iv.1934 (K. Jordan), 5 ♂♂.

Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12.v.1934 (K. Jordan), 2 ♂♂, 2 ♀♀.

52. *Trichopisthia igneotincta* Aurivillius (Plate v, fig. 7, ♂; figs. 10, 11, ♂ genitalia).

*Craspia igneotincta* Aurivillius, *Ark. Zool.* (5), v, p. 21 (1909).

Angola, Amboim district, Fazenda Congulu, 700–800 m., 12–16.iv.1934 (K. Jordan), 1 ♂.

Quirimbo, 75 km. E. of P. Amboim, 300 m., 7–12.v.1934 (K. Jordan), 19 ♂♂.

Bihé, Gamba, i.1935 (R. Brann), 1 ♂.

A variable series, the specimen figured showing the maximum degree of orange rufous streaking, which some specimens entirely lack. The latter have the forewings vandyke brown. One specimen approaches in appearance that figured by Grünberg as *Lasiocampa poecilosticta* (*Denkschr. med.-nat. Ges. Jena.* xvi, p. 136, pl. iii, fig. 14 (1910)). Dr. Jordan obtained many more ♂♂ than those recorded above, but no ♀♀.

It remains to be discovered how far *T. poecilosticta* Grünberg, treated by Aurivillius (in Scitz, *Grossschmett. der Erde*, xiv, p. 223, pl. 30c, 1927) as a local race (Damaraland) of *T. igneotincta*, differs from the typical subspecies, but a specimen from Tanganyika exhibits differences in the genitalia as shown on Plate v, figs. 8 and 9. In this subspecies the valve has a distinctly broader, shorter neck and the vesica of the aedeagus has an armature of much more delicate spines. I propose to name this subspecies *Trichopisthia igneotincta eothina* subsp. n. Holotype ♂: Tanganyika Territory, Kilosa, at light, 5.iii.1926 (N. C. E. Miller).

## GONOMETINAE.

53. *Gonometa bicolor* Dewitz (Plate xi, fig. 12, a copy of Dewitz's figure).

*Gonometa bicolor* Dewitz, *Verh. Leop.-Carol. Akad. Nat.*, xlii, p. 73, pl. ii, fig. 1 (1881).

Recorded only from Chinchoxo (Dr. Falkenstein). This species may be related to *Pachymeta lamborni* Aurivillius (*Ark. Zool.*, ix (11), p. 6 (1915), the only species known to me bearing any resemblance to the figure, which, however, represents a ♀ much smaller than the only ♀ of that species I have seen. I certainly do not know a true *Gonometa* like it.

54. *Anadiasa punctifascia* Walker (Plate xi, figs. 17, 18, ♂♂).

*Eriogaster punctifascia* Walker, *List. Lep. Ins. B. M.*, vi, p. 1472 (1855).

S.W. Africa, Sissekab, N.W. of Otavi, 1,300 m., 14.xi.1933 (K. Jordan), 4 ♂♂.

55. *Pseudometa jordani* sp. n. (Plate xi, fig. 16, holotype ♂).

♂. Antenna honey yellow, the shaft sepia. General coloration warm sepia, with light buff sealing on pectus and femora. Forewing with a light buff lunule at end of cell, and a series of subterminal fuscous-black dots. Hindwing with the

inner-marginal area extended to form a short, blunt tail. Fringes finely edged with light buff.

Expanse : 33 mm. Forewing length : 15 mm.

Holotype ♂. Angola, Quirimbo, 75 km. E. of P. Amboim, 300 m., 7-12.v.1934 (K. Jordan).

56. **Pseudometa plinthochroa** sp. n. (Plate xi, fig. 15, holotype ♂).

♂. Palpus, antennal shaft, head, thorax, pectus and venter madder brown finely irrorate with light buff. Antennal pectinations honey yellow. Abdomen tergally warm buff suffused with madder brown. Legs light buff strongly suffused with madder brown, the foretibia outwardly edged with strong fuscous shading, irrorate with light buff. Forewing madder brown, with a white-centred fuscous-black spot at end of cell, and a subterminal series of fuscous black dots. Hindwing light buff suffused with madder brown.

Expanse : 36 mm. Forewing length : 33 mm.

Holotype ♂. Angola, Mt. Moco, Luimbale, 1,800-1,900 m., 13.iii.1934 (K. Jordan).

57. **Pseudolyra caiala** sp. n. (Plate xi, fig. 9, holotype ♂).

♂. Warm buff shaded with fuscous, hindwings warm buff only, the fasciae fuscous ; subterminal fascia interrupted at the veins.

Expanse : 40 mm. Forewing length : 18 mm.

Holotype ♂. Angola, Bihé, Caiala, 12.x.1904 (W. J. Ansorge).

58. **Pseudolyra miona** sp. n. (Plate xi, fig. 11, holotype ♀ ; fig. 10, paratype ♀).

♀. Palpus warm buff. Antenna warm buff irrorate with drab. Head warm buff mixed with fuscous, the scales white-tipped. Thorax light buff mixed with fuscous, the scales white-tipped. Abdomen tergally light buff streaked with drab. Pectus, legs and venter warm buff irrorate with drab. Forewing hoary, fuscous or russet vinaceous and white mixed, the white slightly predominating, warm buff along costa and veins ; a fine, bowed (concavity basad) fuscous antemedial fascia ; a trace of fuscous on the discocellulars ; a fine fuscous postmedial fascia, bowed beyond and round end of cell ; a fuscous subterminal fascia of fine, oblique dashes, roughly parallel with termen ; fringe russet vinaceous mixed with white. Hindwing russet vinaceous (predominant) and white mixed, the appearance less hoary than that of forewing. Underside of both fore- and hindwings light buff tinged with vinaceous russet.

Expanse : 34 mm. Forewing length : 15.5 mm.

Holotype ♀ and paratype ♀. Angola, Mt. Moco, Luimbale, 1,800-1,900 m., 13.iii.1934 (K. Jordan).

59. **Pseudolyra lineadentata** Bethune-Baker (Plate xi, fig. 7, holotype ♂ ; fig. 8, ♀).

*Pseudolyra lineadentata* Bethune-Baker, *Ann. Mag. Nat. Hist.* (8), vii, p. 561 (1911).

Bethune-Baker's type is labelled :

N. Angola, N'Dalla Tando, 2,700 feet, 21.xii.1908 (W. J. Ansorge).

A specimen (♂) in the Zoological Museum, Tring, bears the data :  
Angola, Fort Don Carlos, 21. ix. 1903 (Dr. Ansorge).

The ♀ figured is in the Tring Museum, and is labelled : Pungo Andongo  
(A. v. Homeyer).

60. **Mallocampa zopheropa** Bethune-Baker (Plate xi, fig. 13, holotype ♂).

*Metanastria zopheropa* Bethune-Baker, *Ann. Mag. Nat. Hist.* (8), vii, p. 565 (1911).

The type is labelled : West Africa, Gunnal.

### GASTROPACHINAE.

61. **Opisthodontia jordani** sp. n. (Plate xi, fig. 2, holotype ♂).

♂. Palpus brownish vinaceous to russet vinaceous, first segment ventrally light buff, remainder irrorate with light buff. Antenna honey yellow, the shaft vinaceous tawny irrorate with light buff. Head and thorax brownish vinaceous to russet vinaceous and vinaceous tawny. Abdomen tergally light to warm buff. Pectus warm buff, brownish vinaceous in front. Venter warm buff shaded with brownish vinaceous. Legs russet vinaceous to vinaceous tawny streaked with light to warm buff. Forewing brownish vinaceous to purplish vinaceous, russet vinaceous along costa and veins, the darker colours masked by a fine, dense streaking of light buff ; antemedial fascia and postmedial fascia fuscous, fine ; subterminal fascia indistinct, fuscous ; a fine preterminal edging of sepia ; fringe light buff. Hindwing similar, the light buff streaking more uniform and producing a greyish effect ; the preterminal edging more pronounced. Underside colouring similar ; forewing with postmedial fascia not crenate ; hindwing with area surrounding accessory cell and veinlets dark vinaceous brown, long warm buff hair-scales from base along inner margin ; postmedial fascia more or less evenly bowed (concavity basad).

Expanse : 40 mm. Forewing length : 19 mm.

Holotype ♂. Angola, Amboim district, Fazenda Congulu, 700-800 m., 12-16. iv. 1934 (K. Jordan).

62. **Opisthodontia rothschildi** sp. n. (Plate xi, fig. holotype ♂).

♂. Palpus chocolate, with some fuscous shading, inner side light buff. Antenna honey yellow, the shaft chocolate. Head and thorax chocolate. Abdomen tergally vinaceous russet. Pectus and venter vinaceous russet strongly suffused with chocolate. Legs chocolate with some light buff irroration. Forewing chocolate sparsely irrorate with light buff, the medial and preterminal areas degraded with livid brown, fasciae indistinct, veins irrorate with light buff ; fringe interneurally finely edged with white. Hindwing similarly coloured, with less livid brown. Underside forewing lighter (cameo brown) than that of hindwing, which is more like upperside, but has the bilineate fascia more distinct.

Expanse : 38 mm. Forewing length : 17.5 mm.

Holotype ♂ and paratype ♂. Angola, Bihé, Gamba, xii. 1934 (R. Braun).

63. **Opisthodontia dentata** Aurivillius (Plate xi, fig. 1, ♂)

*Opisthodontia dentata* Aurivillius, *Ent. Tidskr.*, xx, p. 245 (1899).

The specimen figured is a ♂ with the following data : Ogové River, Lam-barené, v. 1907 (Dr. Ansorge).

## PLATE III.

- Fig. 1. *Chrysopsyche mirifica leptophyes* Tams, subsp. n. ♂.  
 " 2. " " " " " " ♀.  
 " 3. *Lechriolepis dewitzi* Aurivillius, ♂.  
 " 4. " " " " " " ♀.  
 " 5. *Chrysopsyche radei* Dewitz, holotype ♂.  
 " 6. *Beralade quirimbo* Tams, sp. n. ♂, enlarged view.  
 " 7. " " *exocyrtu* Tams, subsp. n. ♂, enlarged.  
 " 8. " " " Tams, sp. n. ♂.  
 " 9. " " *exocyrtu* Tams, subsp. n. ♂.  
 " 10. " *parva* Aurivillius, ♂.  
 " 11. " " " " " " ♀.  
 " 12. " *jordani* Tams, sp. n., holotype ♂.  
 " 13. " " " " " " allotype ♀.

## PLATE IV.

- Fig. 1. *Laeliopsis gemmata* Wiehgraf, holotype ♂.  
 " 2. " " " " " " ♂.  
 " 3. *Cdontocheilopteryx tridonta* Tams, sp. n., holotype ♂.  
 " 4. " " " " dorsal half of 9th segment.  
 " 5. " " *myxa* Wallengren, dorsal half of 9th segment.  
 " 6. " " *tridonta* Tams, lateral view of genitalia *in situ*.  
 " 7. " " *myxa* Wallengren, aedeagus.  
 " 8. " " *tridonta* Tams, ventral half of 9th segment.  
 " 9. " " *myxa* Wallengren, ventral half of 9th segment.  
 " 10. " " " " aedeagus.

## PLATE V.

- Fig. 1. *Philotherma tandoensis* Bethune-Baker, holotype ♂.  
 " 2. " " " " " " ♂.  
 " 3. " " " " " " ♀.  
 " 4. " *melambela* Tams, sp. n., holotype ♀.  
 " 5. *Odontopacha spissa* Tams, ♂.  
 " 6. " " " " ♀.  
 " 7. *Trichopisthia igneotincta* Aurivillius, ♂.  
 " 8. " " *eothisa* Tams, subsp. n., valves of ♂ genitalia.  
 " 9. " " " " aedeagus.  
 " 10. " " valves of ♂ genitalia.  
 " 11. " " aedeagus.

## PLATE VI.

- Fig. 1. *Catalebeda producta* Walker, ♂.  
 " 2. " *elegans meridionalis* Tams, subsp. n., holotype ♂.  
 " 3. " " " " 8th ventrite.  
 " 4. " " *elegans* Aurivillius, 8th ventrite.  
 " 5. *Nadiasa janseni* Tams, sp. n., holotype ♂.  
 " 6. " *carinata* Wallengren, ♂.

- Fig. 7. *Nadiasa concolor* Walker, ♂.  
 „ 8. „ „ „ ♀.  
 „ 9. „ *jordani* Tams, sp. n., holotype ♂.  
 „ 10. „ *pancala* Tams, sp. n., holotype ♀.  
 „ 11. „ *quirimbo* Tams, sp. n., holotype ♀.  
 „ 12. „ *oinopa* Tams, sp. n., holotype ♂.  
 „ 13. „ „ „ „ allotype ♀.  
 „ 14. „ „ „ „ armature of *ostium bursae*, showing the long process of the *lamella antevaginalis*.

PLATE VII.

- Fig. 1. *Nadiasa directa* Mabille, holotype ♀.  
 „ 2. „ „ „ „ ♀, lateral view of armature of *ostium bursae*, showing process of *lamella antevaginalis*.  
 „ 3. *Nadiasa directa* Mabille, holotype ♀, the same, ventral view.  
 „ 4. „ *amphilecta* Tams, sp. n., holotype ♀.  
 „ 5. „ *pamphci g's* „ „ „ ♀.  
 „ 6. „ *amblycalymma* Tams, sp. n., ♀, armature of *ostium bursae*.  
 „ 7. „ *amphilecta* Tams, sp. n., armature of *ostium bursae*.  
 „ 8. „ *basale* Walker, ♂, 9th segment and genitalia.  
 „ 9. „ „ „ ♀, armature of *ostium bursae*.  
 „ 10. „ *cuneata* Distant, ♂, 9th segment and genitalia.  
 „ 11. „ „ „ ♂, ventral half of 9th segment.  
 „ 12. „ „ „ ♀, armature of *ostium bursae*.  
 „ 13. „ *toryncteta* Tams, sp. n., holotype ♀.  
 „ 14. „ „ „ „ armature of *ostium bursae*.  
 „ 15. „ *pamphenges* Tams, sp. n., ♀, armature of *ostium bursae*.

PLATE VIII.

- Fig. 1. *Nadiasa pachyla* Tams, sp. n., holotype ♂.  
 „ 2. „ „ „ „ allotype ♀.  
 „ 3. „ *graberii* Dewitz, holotype ♀.  
 „ 4. „ „ „ Cameroons.  
 „ 5. „ *sminthocara* Tams, sp. n., holotype ♀.  
 „ 6. „ *pachyla* Tams, larva.  
 „ 7. „ *oinopa* Tams, larva.  
 „ 8. „ *coilotoma* Bethune-Baker, holotype ♂.  
 „ 9. „ *distinguenda* Aurivillius, larvae.

PLATE IX.

- Fig. 1. *Pachypasa subfascia* Walker, ♀.  
 „ 2. „ „ „ ♂.  
 „ 3. „ *dallana* Bethune-Baker, holotype ♀.  
 „ 4. „ *imitans* Aurivillius, ♂.  
 „ 5. „ *mesoleuca pyrsocoma* Tams, subsp. n., holotype ♀.  
 „ 6. „ *pyrsocorsa* Tams, sp. n., holotype ♀.  
 „ 7. „ *horrathii* Dewitz, ♀.

## PLATE X.

- Fig. 1. *Leipoxais peraffinis* Holland, ♂.  
 ,, 2. ,, *crenulata* Bethune-Baker, holotype ♂.  
 ,, 3. ,, *marginepunctata* Holland, ♂.  
 ,, 4. *Eucraera k llikerii* Dewitz, ♂.  
 ,, 5. ,, *gemmata asaphes* Tams, subsp. n., allotype ♀.  
 ,, 6. ,, *aphrasta* Tams, sp. n., holotype ♂.  
 ,, 7. ,, *gemmata asaphes* Tams, subsp. n., paratype ♀.  
 ,, 8. *Mimopacha jordani* Tams, sp. n., holotype ♂.  
 ,, 9. ,, ,, ,, allotype ♀.  
 ,, 10. ,, *gerstaeckerii* Dewitz, paratype ♂.  
 ,, 11. ,, *knoblauchii* Dewitz, paratype ♂.  
 ,, 12. ,, *excavata* Hering, paratype, ♂.

## PLATE XI.

- Fig. 1. *Opisthodontia dentata* Aurivillius, ♂.  
 ,, 2. ,, *jordani* Tams, sp. n., holotype ♂.  
 ,, 3. ,, *rothschildi* Tams, sp. n., holotype ♂.  
 ,, 4. *Olyra sublineata* Walker, ♂.  
 ,, 5. ,, ,, ,, ♀.  
 ,, 6. ,, ,, ,, larva.  
 ,, 7. *Pseudolyra lineadentata* Bethune-Baker, holotype ♂.  
 ,, 8. ,, ,, ,, ♀.  
 ,, 9. ,, *caiala* Tams, sp. n., holotype ♂.  
 ,, 10. ,, *miona* Tams, paratype ♀.  
 ,, 11. ,, ,, ,, holotype ♀.  
 ,, 12. *Gonometa bicolor* Dewitz, copy of original figure.  
 ,, 13. *Mallocampa zopheropa* Bethune-Baker, holotype ♂.  
 ,, 14. *Pachypasa papyroides* Tams, sp. n., holotype ♀.  
 ,, 15. *Pseudometa plinthochroa* Tams, sp. n., holotype ♂.  
 ,, 16. ,, *jordani* Tams, sp. n., holotype ♂.  
 ,, 17. *Anadiasa punctifascia* Walker, ♂.  
 ,, 18. ,, ,, ,, ♂.
-